

## ABSTRACT

Carbon nanoparticles including both nanofilaments and nanotubes produced by an electrochemical deposition method from organic solutions at room temperature, in which the  
5 formation and growth of carbon nanoparticles are stimulated by the catalyst, such as iron and nickel. It has been found that the electrochemical deposition conditions have a strong influence on the growth phenomenon of the carbon nanotubes. Scanning electron microscope (SEM) and transmitting electron microscope (TEM) characterizations show that the diameter of nanotubes is of the order of approximately 100 nm, and the length of filaments can be up  
10 to approximately 50  $\mu\text{m}$ , depending on the size of catalyst particles.